

The following claims are presented for examination:

- 1. (Currently Amended)** A method of processing a communication in a communication system, the method comprising the steps of:

 - generating a plurality of terms by combining at least one word and at least **one** word class;
 - identifying a plurality of words contained within the communication; and
 - classifying the communication containing the plurality of words by utilizing a joint classifier to determine at least one category for the communication based on application of the plurality of terms to the plurality of words without considering whether a given one of the plurality of terms is a word or a word class.
- 2. (Original)** The method of claim 1 wherein the joint classifier is implemented at least in part in a processor-based device of the communication system.
- 3. (Original)** The method of claim 2 wherein a natural language call routing element of the switch routes the communication to a particular one of a plurality of destination terminals of the system based on the determined category.
- 4. (Original)** The method of claim 1 wherein an automatic word class clustering algorithm is utilized to generate the word class from at least one training corpus.
- 5. (Previously presented)** The method of claim 1 wherein one or more of the words and word classes utilized to generate the plurality of terms are selected using information gain based term selection.
- 6. (Previously presented)** The method of claim 5 wherein the information gain based term selection determines an information gain value for each of the plurality of terms, the information gain value being indicative of entropy variations over a plurality of possible categories, and being determined as a function of a perplexity computation for an associated classification task.
- 7. (Previously presented)** The method of claim 1 wherein the plurality of terms is generated by appending a class corpus to a word corpus.
- 8. (Previously presented)** The method of claim 1 wherein the plurality of terms is generated by joining sets of multiple words with corresponding sets of word classes.

9. (Previously presented) The method of claim 1 wherein the plurality of terms is generated by interleaving individual words with their corresponding word classes.

10. (Previously presented) A method of processing a communication in a communication system, the method comprising the steps of:

- identifying a plurality of words contained within the communication; and
- classifying the communication containing the plurality of words utilizing a joint classifier to determine at least one category for the communication based on application of the plurality of terms to the plurality of words without considering whether a given one of the plurality of terms is a word or a word class;

wherein the combination of word information and word class information comprises at least one term-category matrix characterizing words and word classes selected using information gain based term selection.

11. (Original) The method of claim 10 wherein a cell i, j of the term-category matrix comprises information indicative of a relationship involving an i -th selected term and a j -th category.

12. (Previously presented) A method of processing a communication in a communication system, the method comprising the steps of:

- identifying a plurality of words contained within the communication; and
- classifying the communication containing the plurality of words utilizing a joint classifier to determine at least one category for the communication based on application of the plurality of terms to the plurality of words without considering whether a given one of the plurality of terms is a word or a word class; and

wherein the information gain based term selection calculates information gain values for each of a plurality of terms, a given one of the terms comprising a word or a word class, sorts the terms by their information gain values in a descending order, sets a threshold as the information gain value corresponding to a specified percentile, and selects the terms having an information gain value greater than or equal to the threshold.

13. (Original) The method of claim 12 wherein the selected terms are processed to form a term-category matrix utilizable by the joint classifier in determining one or more categories for the plurality of words.

14. (Currently Amended) The method of claim ~~[[1]]~~ **12** wherein the joint classifier comprises a joint latent semantic indexing classifier.

15. (Previously presented) An apparatus for processing a communication in a communication system, the apparatus comprising:

a processor-based device operative to generate a plurality of terms by combining at least one word and at least word class, to identify a plurality of words contained within the communication, and to classify the communication containing the plurality of words utilizing a joint classifier to determine at least one category for the communication based on application of the plurality of terms to the plurality of words without considering whether a given one of the plurality of terms is a word or a word class.

16. (Original) The apparatus of claim 15 wherein the processor-based device comprises a switch of the communication system.

17. (Original) The apparatus of claim 15 wherein the processor-based device comprises a processor coupled to a memory.

18. (Previously presented) An article of manufacture comprising a machine-readable storage medium containing software code for use in processing a communication in a communication system, wherein the software code when executed implements the steps of:

generating a plurality of terms by combining at least one word and at least word class;

identifying a plurality of words contained within the communication; and

classifying the communication containing the plurality of words by utilizing a joint classifier to determine at least one category for the communication based on application of the plurality of terms to the plurality of words without considering whether a given one of the plurality of terms is a word or a word class.